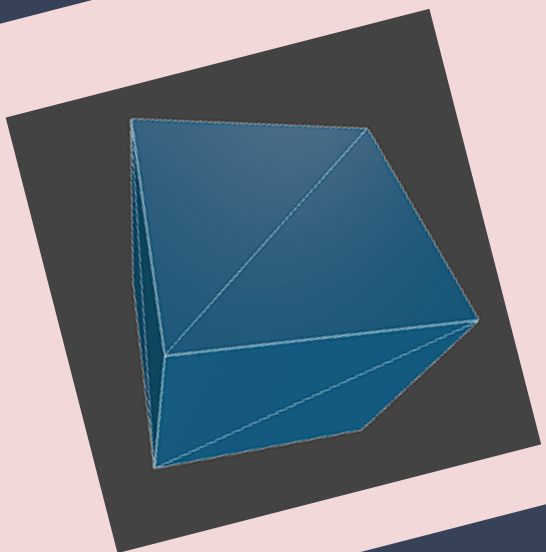
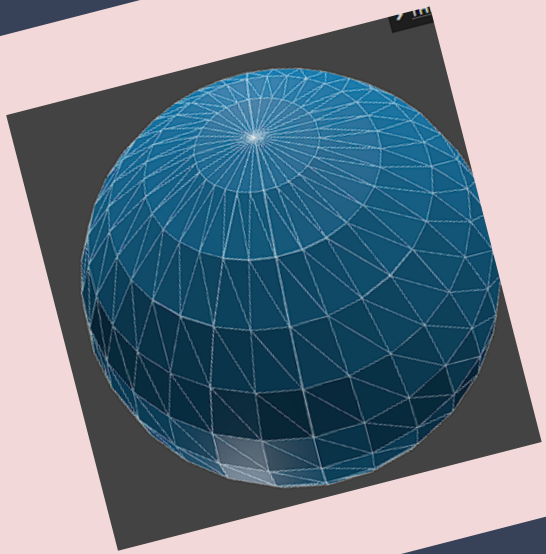
THE **ULTIMATE** three.js **GEOMETRY** GUIDE





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What this **guide** is *about*

This guide is aimed at beginner programmers that are currently learning to use three.js

It includes all of the basic geometry types that one may need, in order to elevate your project to a new level!

For every instance replace the “BoxGeometry” or equal.

So what are you waiting, let’s get started.

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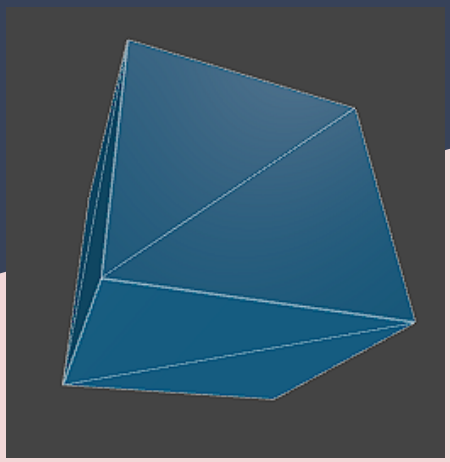
BoxGeometry

Cube



BoxGeometry, represents a cube.
It is one of the **most commonly** used geometries.

It takes **3** parameters:
+ (float) width
+ (float) height
+ (float) depth

i.e.

```
BoxGeometry(15, 15, 15)
```

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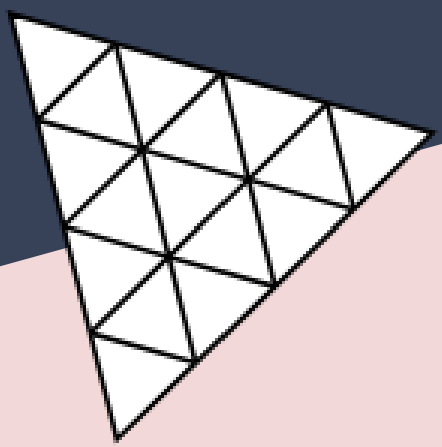
BoxGeometry

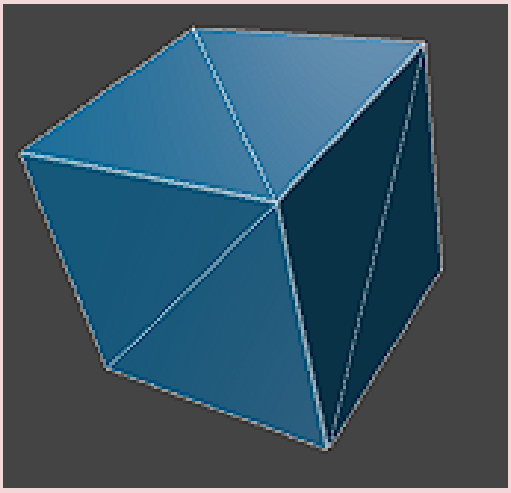
Examples



Here are a couple of examples showcasing this geometry! Beside each code is the result picture

```
// ... three.js rendering / scene code ...
const geo = new THREE.BoxGeometry(10, 10, 10);
const mat = new
  THREE.MeshBasicMaterial({color:0x00000ff});

const cube = new THREE.Mesh(geo, mat);
scene.add( cube );
```



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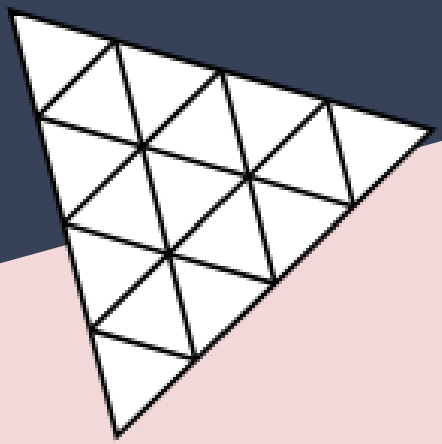
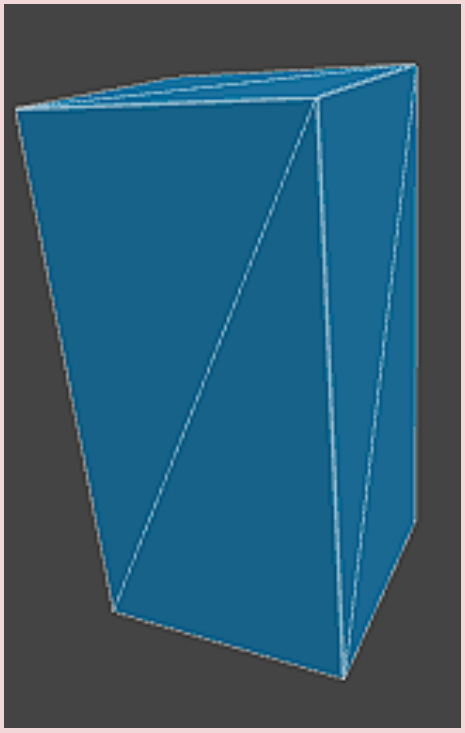
BoxGeometry Examples



Here is another example with different height

```
// ... three.js rendering / scene code ...
const geo = new THREE.BoxGeometry(10, 20, 10);
const mat = new
  THREE.MeshBasicMaterial({color:0x0000ff});

const cube = new THREE.Mesh(geo, mat);
scene.add( cube );
```



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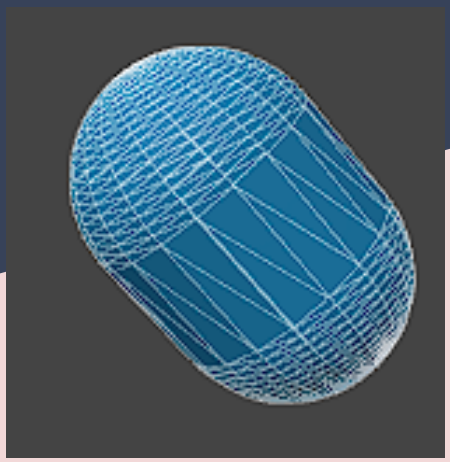
CapsuleGeometry

Capsule



CapsuleGeometry, represents a capsule.

It takes **2** parameters:
+ (float) radius - Radius of the capsule
+ (float) length - Length of the middle

i.e.

```
CapsuleGeometry(5, 5)
```

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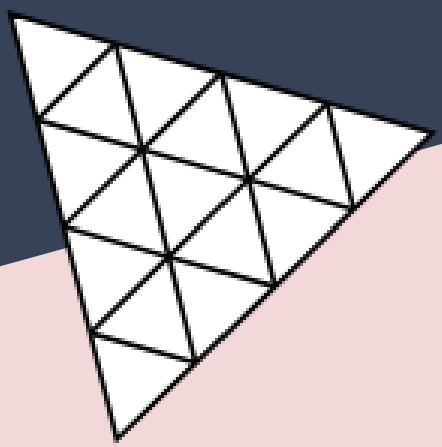
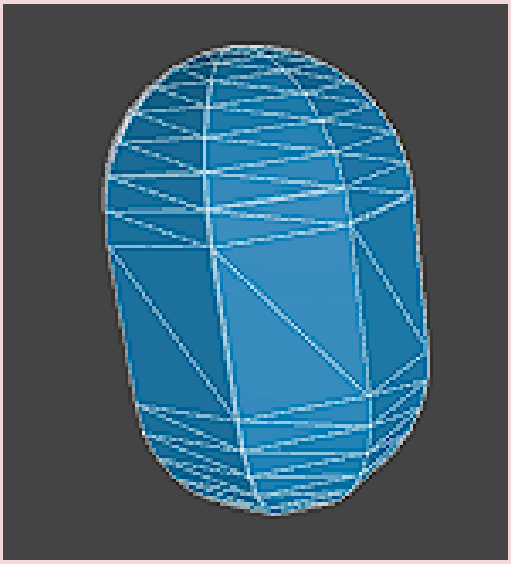
CapsuleGeometry Examples



Here are a couple of examples showcasing this geometry! As before, pictures included!

```
// ... three.js rendering / scene code ...
const geo = new THREE.CapsuleGeometry(5, 5);
const mat = new
  THREE.MeshBasicMaterial({color:0x0000ff});

const cube = new THREE.Mesh(geo, mat);
scene.add( cube );
```



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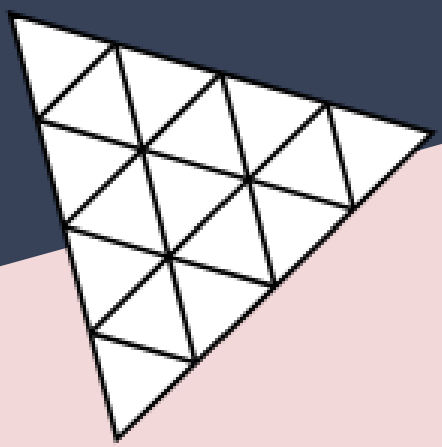
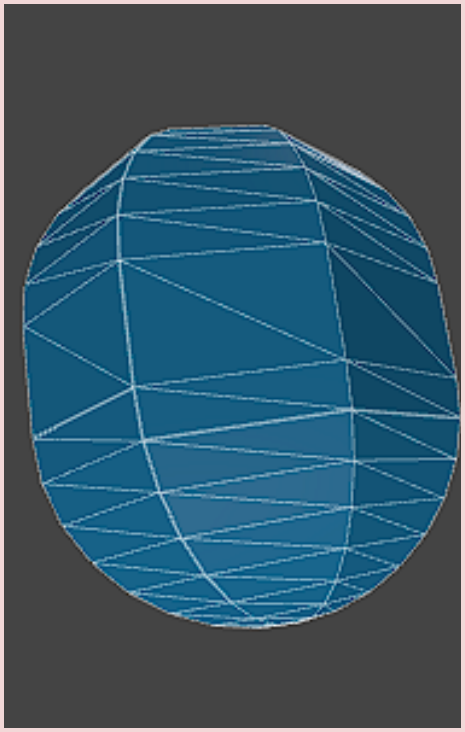
CapsuleGeometry Examples



Here is another example with different radius

```
// ... three.js rendering / scene code ...
const geo = new THREE.CapsuleGeometry(10, 5)
const mat = new
  THREE.MeshBasicMaterial({color:0x0000ff});

const cube = new THREE.Mesh(geo, mat);
scene.add( cube );
```



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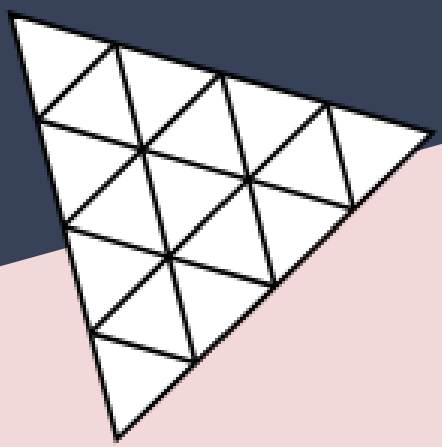
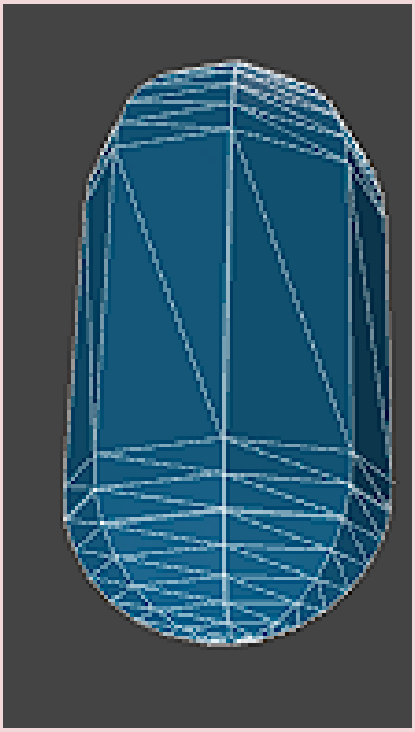
CapsuleGeometry Examples



Here is another example with different length

```
// ... three.js rendering / scene code ...
const geo = new THREE.CapsuleGeometry(5, 10)
const mat = new
  THREE.MeshBasicMaterial({color:0x0000ff});

const cube = new THREE.Mesh(geo, mat);
scene.add( cube );
```



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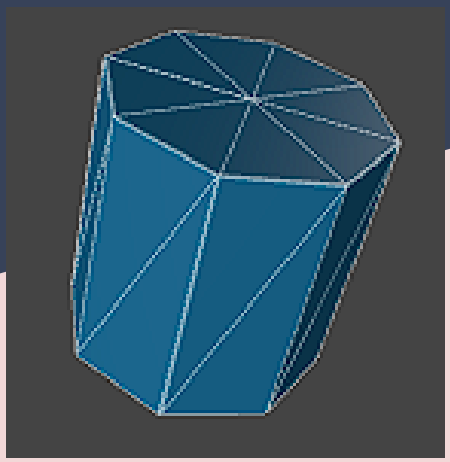
CylinderGeometry

Cylinder



CylinderGeometry, represents a cylinder.

It takes **3** parameters:

+ (float) radiusTop - Radius of the top

+ (float) radiusBottom - Radius of the bottom

+ (float) height - Height of the cylinder

i.e.

```
CylinderGeometry(5, 5, 10)
```

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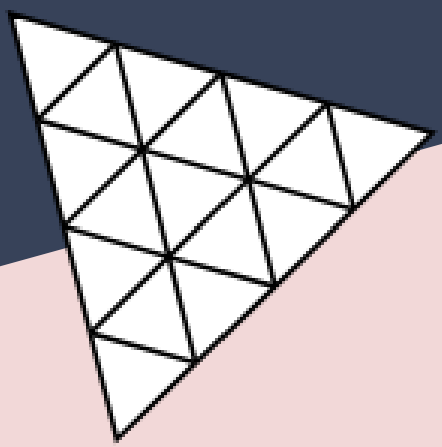
CylinderGeometry

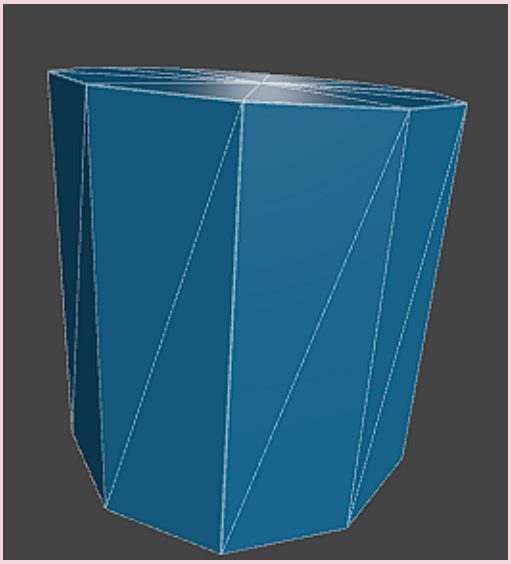
Examples



Here are a couple of examples!

```
// ... three.js rendering / scene code ...
const geo = new THREE.CylinderGeometry(10, 10, 20);
const mat = new
  THREE.MeshBasicMaterial({color:0x0000ff});

const cube = new THREE.Mesh(geo, mat);
scene.add( cube );
```



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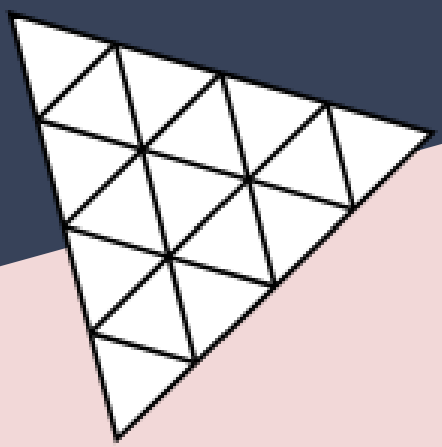
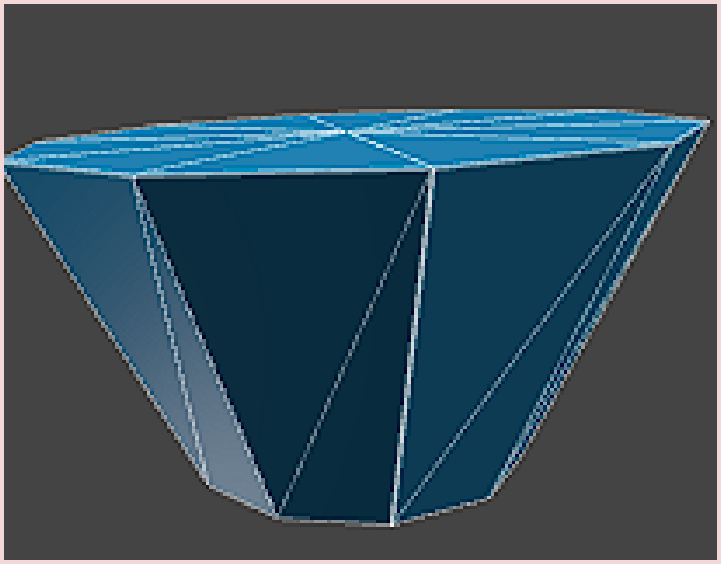
CylinderGeometry Examples



Let’s change the radius top value! TIP: Cylinders are **very userful!**

```
// ... three.js rendering / scene code ...
const geo = new THREE.CylinderGeometry(10, 5, 10);
const mat = new
  THREE.MeshBasicMaterial({color:0x0000ff});

const cube = new THREE.Mesh(geo, mat);
scene.add( cube );
```



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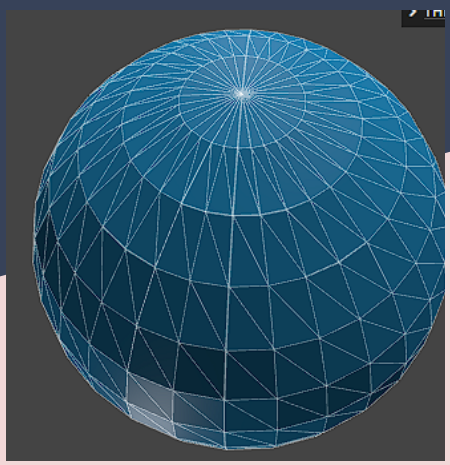
SphereGeometry

Sphere



SphereGeometry, represents a sphere.

It takes **3** parameters:

+ (float) radius - Radius of the sphere

+ (int) widthSegments - # segments horizontally

+ (int) heightSegments - # segments verically

i.e.

```
SphereGeometry(15, 32, 16)
```

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